

Application Serial No.: 10/072,345
Attorney Docket No.: 0190142

List of Claims:

Claim 1 (Currently Amended): A method for increasing the resolution of [a] an image array, the method comprising ~~the steps of~~:

capturing two or more images within the imaging array, each image captured in a successive time interval corresponding to an image capture and storage rate of the imaging array;

correlating pixels of each image to the pixels of the other images; and

combining the correlated pixels of the two or more selected images into a single enhanced image;

wherein an effective resolution of the single enhanced image is greater than a resolution of each of the two or more images.

Claim 2 (Currently Amended): The method of claim 1, wherein the ~~step of~~ combining ~~the correlated pixels~~ comprises ~~the step of~~:

creating new pixel values by interpolating values between the corresponding pixels of the combined images.

Claim 3 (Original): The method of claim 1, wherein the imaging array is comprised of charge-coupled device (CCD) sensors.

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Claim 4 (Original): The method of claim 1, wherein the imaging array is comprised of complementary metal oxide semiconductor (CMOS) sensors.

Claim 5 (Original): The method of claim 1, wherein the imaging array is comprised of silicon germanium (SiGe) sensors.

Claim 6 (Original): The method of claim 1, wherein the successive time interval is between 10 milliseconds (ms) and 100 ms.

Claim 7 (Original): The method of claim 1, wherein the imaging array is a monochrome imaging array.

Claim 8 (Currently Amended): [A] An image enhancing device [,] comprising:
~~an IMAGE_OUT signal for receiving two or more~~ means for receiving a plurality
of successive images from an imaging array;
a memory for storing the plurality of successive images; and
~~an ENHANCED_IMAGE_OUT signal for outputting an enhanced image;~~
means for correlating a first plurality of pixel sensor values of a first image of the plurality of images with a second plurality of pixel sensor values of a second image of the plurality of images; and

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means for combining the first plurality of pixel values with the second plurality of pixel values to generate an enhanced image, such that ~~the~~ an effective resolution of ~~an~~ the enhanced image ~~produced by the means for combining~~ is greater than ~~the~~ a resolution of either the first image or the second image; ~~and~~

~~an ENHANCED_IMAGE_OUT signal for outputting the enhanced image.~~

Claim 9 (Currently Amended): The image enhancing device of claim 8, further comprising:

~~a CONTROL signal~~ means for transmitting an instruction to the imaging array ~~an instruction~~ to capture an additional image and to transmit the additional image ~~via the IMAGE_OUT signal to the means for receiving.~~

Claim 10 (Currently Amended): The image enhancing device of claim 9, further comprising:

means for determining when ~~another~~ the additional image is required from the imaging array; and

means for generating the ~~CONTROL signal~~ instruction when the determining means determines ~~that another~~ the additional image is required.

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Claim 11 (Currently Amended): The image enhancing device of claim 8, wherein the ~~two or more~~ plurality of successive images are transmitted by the imaging array between 10 milliseconds (ms) and 100 ms apart.

Claim 12 (Currently Amended): The image enhancing device of claim 8, wherein the ~~two or more~~ plurality of images are captured within the imaging array by charge-coupled device (CCD) sensors.

Claim 13 (Currently Amended): The image enhancing device of claim 8, wherein the ~~two or more~~ plurality of images are captured within the imaging array by complementary metal oxide semiconductor (CMOS) sensors.

Claim 14 (Currently Amended): The image enhancing device of claim 8, wherein the ~~two or more~~ plurality of images are monochrome images.

Claim 15 (Currently Amended): A digital camera [,] comprising:
an imaging array; and
[a] an image enhancement device coupled to the imaging array, ~~comprising the~~
image enhancement device including:
a memory for storing two or more images ~~transmitted~~ received from
the imaging array;

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logic for correlating a first plurality of pixel sensor values of a first image of the two or more of images with a second plurality of pixel sensor values of a second image of the two or more of images; and

logic for combining the first plurality of pixel values with the second plurality of pixel values to generate an enhance image, such that an ~~enhanced image is produced and~~ the effective resolution of the enhanced image is greater than ~~the~~ a resolution of either the first image or the second image.

Claim 16 (Currently Amended): The digital camera of claim 15, the image enhancement device further comprising:

a ~~CONTROL signal for transmitting~~ transmitter configured to transmit an instruction to the imaging array ~~an instruction~~ to capture an additional image and to transmit the additional image to the image enhancement device image ~~via an~~ IMAGE_OUT signal.

Claim 17 (Currently Amended): The digital camera of claim 15, wherein the time between the two or more ~~successive~~ is between 10 milliseconds (ms) and 100 ms.

Claim 18 (Original): The digital camera of claim 15, wherein the two or more images are captured within the imaging array by charge-coupled device (CCD) sensors.

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Claim 19 (Original): The digital camera of claim 15, wherein the two or more images are captured within the imaging array by complementary metal oxide semiconductor (CMOS) sensors.

Claim 20 (Original): The digital camera of claim 15, wherein the digital camera is a monochrome camera.